AMENDMENTS TO THE SPECIFICATION

Please replace paragraph **[0004]** with the following amended paragraph:

[0004] Fig. 2 is an example illustration of spot beams positioned over predefined Earth locations utilizing the previously mentioned antenna system. Satellite 710 positions its spot beams 740 to cover South America and the east coast of the United States from its location at [[45]]47 degrees west longitude.

Please replace paragraph **[0006]** with the following amended paragraph:

[0006] Spot beam broadband systems frequently divide the system's capacity into beam groups. In a typical system, each group consists of a number of coverage regions on the ground and the related satellite resources allocated to serving these regions. They can have switches to cahnge which spot beam will be transmitted or to switch signals between different paths, and individual examples of switching downlink beams are common. More than on payload channel may be directed at any given location within the range of the satellites. Systems historically have pre-defined how spectrum was to be allocated among the coverage areas and hard-wired power dividers, power-divide modules, or other modules that were used to allocate bandwidth. The problem with this approach is that demand for the system is highly uncertain, and it is likely that some cells will have over-allocated resources while others will have under-allocated resources. There is a need for a flexible approach to on-orbit~~, reallocate~~ reallocation of satellite downlink channel bandwidth among cells in a group.

Please replace paragraph **[0031]** with the following amended paragraph:

[0031] The example of redundancy pooling shown in Fig. 4 uses 6-for-4 sparing of entire strings. Although redundancy pools may provide for single hardware units, the sparing in the example shown in Fig. 4 is done for entire strings. In addition to four active strings (each comprising an up-converter (U/C) 320, a K-band linearized channel amplifier 330, and a TWTA 340), there are two spare strings (each also comprising an up-converter (U/C) [[320']]320, a K-band linearized channel amplifier [[330']]330, and a TWTA [[340']]340). Likewise, the C-band

redundancy switching network 310 includes four switches for incoming signals provided to four respective active strings as well as two switches connected to respective loads and the two spare strings. The K-band redundancy switching network 350 includes four switches for signals output from the four active strings as well as two switches connected to the spare strings and to respective loads.

Please replace paragraph **[0040]** with the following amended paragraph:

[0040] The OMUX 422 in combination with the switches 412 and 414 allow four different signals or combinations of signals to be output from the OMUX 422. As shown, these possibilities include the following: AB, A, B, and [[ϕ]]0, where [[ϕ]]0 represents no signal. Likewise, the OMUX 424 in combination with the switches 412 and 414 allow four different signals or combinations of signals to be output from the OMUX 424. As shown, these possibilities include the following: [[O]]0, B, A, and AB. Still further, the OMUX 426 in combination with the switches 416 and 418 allow four different signals or combinations of signals to be output from the OMUX 426. As shown, these possibilities include the following: CD, C, D, and [[O]]0. Finally, the OMUX 428 in combination with the switches 416 and 418 may output four different signals or combinations of signals from the OMUX 428. As shown, these possibilities include the following: [[O]]0, D, C, and CD.